

General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

NASA's EFFORTS IN PROVIDING NEW DATA
CLAUSES PERTINENT TO SOFTWARE
Software Protection Workshop
June 4, 1969
G. T. McCoy
Deputy Assistant General
Counsel for Patent Matters, NASA

Before embarking on an attempt to explain how NASA proposes to cope with the question of how to handle software, computer programs, in their procurement, I suppose that I should, in keeping with the trend of the workshop, program a change into my handout to correct an error. However, I must admit that I would probably "output" where I should "input" in Fortran language, so I will just use the old reliable way instead. On the first page of the proposed regulations, page 9351, in line 13, after "contract" insert "the contractor shall notify the contracting officer."

I suppose one must say that we drafted our proposed regulations from the best experience that we have had to date, trying to recognize the various ways in which software may be protected, and at the same time serving our own needs in this area. I overheard a conversation during a break to the effect that our proposed regulations appear to be a "wipe-out" of

NR 9-39891

(ACCESSION NUMBER)

16

(PAGES)

(THRU)

1

(CODE)

08

(CATEGORY)

TMX-6/892

(NASA CR OR TMX OR AD NUMBER)

private rights to computer programs. I hope this is not the case; it was not so intended, and I believe a careful review of the regulations will prove otherwise. I do believe, however, that they will prove to be a challenge to contractors and software vendors who contract with NASA. The regulations should reveal whether there is a real desire to protect and exploit software by the various means available today.

I think it is rather clear by now that the present procurement regulations of most of the government agencies do not face up to the problem of handling computer programs in government procurement. On the other hand, I think that there will be a general agreement that it is not easy to move forward with a meaningful policy in view of the present uncertainty as to the status of computer programs and the validity and scope of protection offered by the law today. Nevertheless, we have made a start, and I guess only a trial period will prove out the soundness of our initial approach.

Actually the proposed new regulations do not really involve any major substantive change over the way our present regulations are applied, and insofar as computer programs are concerned, the proposed regulations are to some extent more favorable to the contractor and the vendor. For example, some of the data

clauses now used by NASA and DOD, and other government agencies, required the contractor to grant to the Government an unlimited license to the contractor's copyright on his computer programs which presumably could result in the computer programs being used by anyone for any purpose, thereby destroying the contractor's commercial value of his copyright. The proposed NASA clauses only require a governmental license from the contractor, thus preserving his commercial rights. Again, the present clauses used by NASA and DOD do not really recognize or accommodate other types of protection which the contractor may utilize to secure his computer program property rights. The proposed NASA clauses make specific provisions for such instances.

Let me try to put our problem in the proper perspective. First of all, we were faced with the task of selecting a basic medium or environment for handling our contractor's privately developed software when it is involved in one of our procurements. If patents are used, our regulations already provide for this means of treatment the same as any other invention, whether the invention is made under a NASA contract or is covered by the contractor's privately owned patent. In other words, since our experience indicates that patents are seldom used as a medium and when they are, the regulations already accommodate

them; patents did not appear to be appropriate as a basic or standard medium.

We therefore turned to the medium of data which seemed to be more appropriate, pertinent and practical. It was realized that in utilizing the data medium for software, protection would and could be sought by two general means, the trade secret route or copyrights. As a practical matter, protection by trade secrets would, in most instances, have to be accomplished by contractual arrangements specifying restrictive conditions concerning disclosure and use of the software. However, our past experience revealed that such restrictive conditions vary considerably from procurement to procurement such that a standard boilerplate clause for handling software under this arrangement would not appear feasible at this time. Hence, we were left with copyrights as a standard medium for accommodating the contractor's software in NASA procurement with trade secret protection as an alternative available on a case-by-case basis.

You will note that I have been talking only about handling a contractor's privately developed software. I would like now to discuss briefly the rationale underlying the policy in these revisions governing the copyrightability of computer programs

developed under a NASA contract in NASA funded computer programs. One of the primary objectives of the revised provisions is to assure that NASA and the Government obtain those rights to computer programs which are necessary to meet the needs of NASA. It is probably widely known by now that NASA has, under its enabling statute, a mandate to provide for the widest practicable dissemination of information concerning its activities and the results thereof. In order to meet this requirement, NASA has established a sizable publication and dissemination program under which its generated technology is made available to the public and the industrial sector. As part of this program, NASA has established a computer software management information center, code name COSMIC, at the University of Georgia, and also maintains a sharing library, both of which are keyed to making computer programs generated by NASA, both in-house and under contract, available to the public and government contractors. It is understood that DOD will now make their computer programs available to the public through COSMIC.

Now, when we took a hard look at considering computer programs from a data standpoint, we observed the following. The value of most data, technical or otherwise, can usually

be obtained by reading, analyzing and studying the data without the necessity of physically reproducing or copying the data. Thus, the presence of a copyright prohibiting copying of such data would not generally interfere with these benefits. The Government can, and usually does, permit its contractors to establish a commercial copyright position in such data generated under a NASA contract, reserving unto itself a royalty-free license under the copyright for governmental purposes since the governmental license permits the Government to publish and disseminate the copyrighted data to the public. The public will, under this arrangement, still derive substantial use benefits from the data without the need to copy and infringe the copyright.

While this arrangement will operate satisfactorily to the interests of all parties concerned with the normal type of data produced under a government contract, it is highly questionable whether such an arrangement will be workable when applied to computer program data. This uncertainty is manifested in the questionable status today of the scope of protection available to such data under the copyright law. As pointed out by previous speakers here, in most instances, the value

of a computer program as data will not reside merely in reading the program, but rather in the ability to use it in conjunction with hardware, i.e., a computer.

But the law is not clear as to whether such use with a computer would be considered an act of copying under the copyright law and an infringement of the copyright claimed in the program. We are inclined to believe that such use probably does constitute an act of infringement, or might under presently contemplated revisions of the copyright law. Hence, it may very well be that the public, obtaining a copy of the computer program developed for the Government, which is copyrighted, could not use the computer program with a computer, thus partaking of its inherent value and benefit without potential infringement of the copyright. It follows then that NASA, by permitting its contractors to copyright NASA funded computer programs, could substantially reduce the value of its computer programs which are made available under its dissemination program. This then is the reason that the proposed regulations normally do not grant the contractor the right to copyright NASA funded computer programs, unless prior permission is given.

First of all, what is the policy for NASA funded computer programs, that is, those first produced under a NASA contract? Turning to the regulations, it will be seen that paragraph (b)(1) of Section 9.202-3, entitled Copyright Policy, page 351, states, in effect, that while it is the general policy of NASA to permit contractors to copyright data first produced or prepared incidental to, or as a by-product of, a NASA contract, such permission does not extend to computer programs or computer program data bases or documentation thereof. Now, this policy will be carried out in the normal NASA research and development contract by the language of (c)(2) of the standard R&D Rights in Data clause, 9.203-1, page 354. Incidentally, the definition of subject data appearing in all the Rights in Data clauses has been broadened to clearly accommodate computer programs.

Continuing with NASA funded computer programs, Section (2)(a) of 9.202-3, page 352, entitled "Special Situations," sets forth NASA's data rights where the primary object of the contract is to first produce a computer program or a computer data base. In these instances, the Rights in Data--Special Situations clause of 9.204-1, page 355, will be used, which again will preclude the contractor from asserting any rights

at common law or equity or to establish any claim to statutory copyright with respect to the computer program.

What about the policy for a contractor's or vendor's privately developed computer programs? Paragraph (a) of 9.202-3, page 351, and the copyright section of the Rights in Data clauses of 9.203-1 and 9.204-1 prescribe NASA's policy where a privately developed, copyrighted computer program is to be used or incorporated into the work product under a NASA contract. In essence, this policy states that the contractor should obtain a royalty-free governmental license under the copyright when the material is used or is incorporated into the work product. Permission from the contracting officer must first be obtained to do otherwise.

Finally, the proposed revisions would provide for a Section 9.205-3, page 358, dealing with the purchase of existing computer programs or computer program data bases. Here, attention is directed to the potential availability of existing computer programs from a Federal Supply Schedule contract. If the desired computer program is not available from this source, it may be purchased directly, provided that it meets the authorization requirements set forth by GSA for direct procurement by government agencies from the vendor.

In addition, this section suggests special factors which should be considered when purchasing existing off-the-shelf computer programs. For instance, it points out that the contract should adequately describe the computer program, the form of the program to be delivered, i.e., tape, punch cards, disc packs, and all the necessary documentation pertaining thereto.

It is also emphasized that the contract should specify any limitations on the right of the Government to use or copy the computer program, such as the physical location, number of uses, and other conditions under which the computer program may be utilized. Conditions of purchase will likely vary in most instances, and in this regard, the contracting officer is advised to consult counsel in drafting rights provisions necessary for these purchases. Trade secret protection, as well as copyrights, can be accommodated under this provision.

You might ask suppose a contractor wishes to protect his privately developed computer programs by means other than by copyright. The regulations do recognize that there are other means which the owner may seek to employ to protect his computer program. For example, a contractor may select to safeguard his program by use or disclosure restrictions or he may desire to

have NASA recognize his proprietary interest in his computer program in the same manner as NASA presently protects proprietary data, i.e., trade secret. As to the latter technique, it should be emphasized that proprietary data under the NASA regulations, unlike DOD, is protected by permitting the contractor to withhold such data from delivery. It is rather clear from the NASA definition and requirements for proprietary data that this term was not designed to cover computer program data, and it is doubtful that many programs could qualify as such. In any event, protection by withholding would obviously not be workable in contracts where a contractor would most likely be concerned about his proprietary computer program, that is, in contracts for the purchase of, or a modification to, his proprietary program. The purpose of these types of contracts is to obtain the delivery of the computer program for its use by or for the Government and withholding would defeat this purpose.

For those contractors who rely on contractual restrictions on the use or disclosure of their privately developed computer programs in contracts of these types, the NASA standard data clause would not suffice and would have to be adjusted or replaced by agreed upon use or disclosure conditions. As

previously mentioned, inasmuch as the terms and conditions of each such provision will probably vary, NASA did not see the feasibility of attempting to draft suitable boilerplate clauses to accommodate provisions of this type, but would consider tailoring their clauses on a case-by-case basis.

There will be those that will argue that the NASA policy will stifle incentives by not permitting the contractor to obtain protection on computer programs developed for the Government and will liken it to a strict title policy in the patent area. But the fact is that NASA must obtain for the public the widest possible dissemination and benefits and a contractor's copyright notice on a NASA funded computer program without efforts by the contractor to exploit and disseminate the program does not, in our judgment, meet NASA's needs. A deviation to this general policy would be considered by NASA should the contractor establish that a private copyright would enhance the dissemination and utilization of the computer program. Indeed, the proposed regulations indicate that the public interest may be served in certain instances by permitting the contractor to seek copyright protection. Contractors who feel that their exploitation of copyrights will satisfy NASA requirements should present

their request to the contracting officer for a deviation to the standard NASA policy. Unfortunately, as of today NASA has seen little or no evidence or interest on the part of its contractors to match NASA's broad dissemination and publication programs in return for an exclusive commercial copyright.

Lastly, there is another incentive which might ultimately prove to be effective, although its present status is somewhat dubious. The regulations of the attachment were carefully drafted so as not to preclude the contractor from petitioning the Administrator of NASA for waiver of commercial rights to a computer program developed under the contract which the contractor believes patentable and desires to file a patent application thereon. In such cases, the invention will be considered by NASA in the normal manner under its Patent Waiver Regulations. As a matter of interest, NASA has previously waived title to a contractor on a computer program invention made under a NASA contract. The waiver [No. W-376] was granted to Booz-Allen Applied Research, Inc., on an invention entitled "GSFC Semiconductor Information and Retrieval System." A copy of the findings and recommendations on this waiver is attached.

Having run through the regulations, how would the clauses be applied to different types of procurement involving computer programs:

A. Where a computer program is the sole basis of the contract:

- (1) Supply contract for off-the-shelf, i.e., pre-existing program -- generate a special purpose clause to cover the situation;
- (2) R&D contract for the development of a completely new program -- special situation clause (standard clause dealing with software);
- (3) R&D contract for the modification of a contractor's pre-existing program -- special situation (standard clause dealing with software) or negotiation with contractor where standard not acceptable.

B. Where computer program is ancillary to the hardware being procured under the same procurement -- any one of the conditions under A could exist.

Standard hardware clause, or possibly it and either standard clause for software or special purpose clause.

In closing, I think it is important to remember that the policy and regulations which I have been discussing deal only with rights to software. If software is not called for or specified under a contract, these provisions are, of course, meaningless.

It seems obvious to us that this specific field of technology warrants, indeed, requires, its own procurement acquisition and specification standards, just as provided by the Government for other types of data, such as engineering drawings. To this end, we have recently proposed to our procurement and software personnel that specific documentation requirements for computer programs be included as a scheduled item in all NASA contracts involving a significant amount of computer program development. The proposed documentation requirements would require the delivery of a short abstract of each computer program developed under the contract and also the preparation by the contractor of an additional minimum documentation package. This latter package would be either called for upon completion of the computer program, or delivery could be deferred under deferred delivery provisions.

In other words, computer programs would have their own documentation requirements with an associated deferred delivery requirement. It is our understanding that this task is now underway in NASA and when completed will provide an important procurement innovation for use with the proposed rights provisions which I have discussed today.